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143805 0006 Peoria Sherex Chem SF/ Technical Reports

HANSON ENGINEERS INCORPORATED

MEMORANDUM

TO Bob O'Hara

DATE July 5, 1990

FROM Jeff Larson

SUBJECT Mapleton/Sherex Chemical Company, Inc.

Slurry wall and cap/cover containment system

On July 2, 1990 a meeting between representatives of the IEPA and HEI was conducted to discuss various subjects related to the prelim design of the above referenced project. IEPA was represented by Bob Carson, manager of the State (SRAPL) Superfund sites, and Bob O'Hara, project manager. HEI representatives in attendance were Jim Moll, Dave Daniels and Jeff Larson.

The proposed limits of the slurry wall trench were discussed. HEI generalized the proposed plan by using the Site Boring Maps supplied by IEPA. The Borings noted the position, depth and analytical level of cadmium in site soils. Bob O'Hara pointed out the location of the cadmium contaminated trench on the drawing. The limit and outline of the excavation limits were discussed and decided upon. A minimum dimension of 15 ft from the railroad line must be maintained.

The slurry wall can be placed nearer the cadmium contamination if necessary.

Bob O'Hara will check with Sherex and Envirodyne Engineers to find any available notes used to locates markers and field points used during the geophysical survey data work.

HEI is lacking available information on grain size analysis to determine the compatibility and constructablility of local soils in a bentonite slurry mix. IEPA instructed HEI not to perform any additional field work. Bob O'Hara stated that we should proceed with the design and specify all important materials for the trench and cap/cover development. The Envirodyne RI Boring logos indicate the bedrock to be shale and dolomite. Dave was concerned about penetrating the dolomite to obtain a two ft depth for the slurry wall with a keyway and level the surface area. The IEPA said a 2 ft penetration depth was not absolutely necessary. The wall will be placed through a corner of a spill containment basin. Bob O'Hara will ask Sherex about the future of the tank. We can have it removed or have a new containment area included in our plans. Jeff will check on rules and regulations to determine design standards for the basin.

The cap/cover system will follow the general IEPA design for a solid waste (35IAC Part 811) landfill cover. The cover has been modified due to the small size of the site and operation and maintence objectives. The IEPA "Landfill Cover Design Standards" are and will be used for basin design objectives. Bob O'Hara and Bob Carson gave the guidance as to how the cap should be designed. The cap will be compoed of the following coarses of material.

- Leveling Coarse (Intermediate Cover) - Composed of the excavated material from the slurry trench. This material will be graded and compacted over the site and the clay cover placed over it.

- Clay Soil - shall be a 24 in. thick layer of compacted ($1x10^{-7}$ cm/sec) clay. This material must be imported.

- A Flexible Membrane Line (FML) will be placed over the cap.

- Geonet/geotextile system drainage network shall be placed over the FML.

- Cover soil layer 36 in. deep shall cover the drainage network. The top 12 inches of cover soil must be composed of topsoil and vegetation established.

The roads in the area consist of some spread aggregate over a soilbed. Due to the volume of truck topsoil and potential of seriously damaging plant roadways, plans should include placement of a geotechnical fabric and compacted aggregate to establish a stable road system and parking area near the support zone.

Bob O'Hara will contact Sherex once again on the question of utility locations.

If IEPA downgrades the level of protection offered by the landfill cap design discussed herein, please notify HEI (Jim Moll or Jeff Larson) as soon as possible so that progress on the design is not set back too drastically. Jim will proceed in developing the conceptual design which IEPA agreed upon in the July 2nd meeting. Thank you for your assistance and for visiting our office Monday morning.